

Posted 31 May 2004

Instructor: Prof Rudy C Tarumingkeng, PhD

# **THE REVISION OF NEW TRADE THEORY A Perspective of Science Philosophy**

By:

**M. R. Yantu**

**P063020021**

[mryantu@yahoo.com](mailto:mryantu@yahoo.com)



**Doctoral Program, Study Program of  
Rural and Regional Development Planning  
POST GRADUATE SCHOOL  
BOGOR AGRICULTURAL UNIVERSITY  
BOGOR, 2004**

*Everything changes, including change, But Allah  
(M.R. Yantu, 2004)*

*For my wife and daughters*

**ABSTRACT**

This working paper intends to revise the new trade theory in order to get a lot of supporters. The working paper will encompass chronological and development of the international trade theory which is in detail will discuss three objects as follow: (i) foundation of ontology of revised version of the new trade theory; (ii) assumption of the foundation, and (iii) epistemology (methodology) level of revised version of the new trade theory.

Chronologically, the development of the international trade theory will present the arising of the new trade theory as a complaint to orthodox system. The complaint gave a result in the form of the new trade theory, which is the object of the philosophical orientation. It is concern about supra-naturalism versus naturalism, foundation for economics ontology, positivism versus post-positivism, and the behavioral assumption in a theory of institutions. The orientation gives a framework of revised version of the new trade theory. The revised version as the new one proposed by this working paper concerns on the foundation of ontology and epistemology level of new trade theory.

The working paper concluded that the revision of the new trade theory have to be developed on foundation of across-science ontology, viz. economics, politics, and social (sociology). This means at least there are three vision of human being, which can be elaborated to become elementary assumption as foundation for philosophy (ontology) of the new trade theory. They are human being as *homo economicus*, *homo hominilupus*, and *homo hominisocius* creatures. The human being with the three vision can be assumed as creature who pursue **creative satisfaction**. The assumption will be realistic if the existing institutions reduce the uncertainties involved in human being interaction. These uncertainties arise as a consequence of both the complexity of the problems solved and the problem-solving software possessed by each person.

Along of revised version of the new trade theory is considering all positive and normative things, at epistemology level, the most appropriate methodology is pragmatism methodology. But to run this methodology it is needed an understanding on system analysis. Therefore, method of tetrahedron analysis and game theory are very required in application of revised version of the new trade theory.

The working paper recommend that to make the powerful assumption (human being is creative satisfaction), it is necessary to pursue a deep study about human being from religion philosophy, human being philosophy, social philosophy, sociology, and psychology aspects.

*Key words: Philosophy of science, international trade, new trade theory, ontology, epistemology, vision of human being, creative satisfaction.*

## **PREFACE**

This working paper is made as a prerequisite to meet final assignment in subject of Philosophy of Science at Doctoral Program, Study Program of Rural and Regional Development Planning, Post Graduate School, Bogor Agriculture University.

In fact, on the whole items of the working paper are selective items of all theory that have been written in working paper of International Trade titled "New Trade Theory Once Again" (not published).

New Trade Theory emerges since International Trade Theory (orthodox system - mainstream economics) was unsatisfied. Unfortunately, New Trade Theory only discuss at axiology and epistemology levels, and it ignores the foundation of ontology. Therefore, the theory has been also still rejected. Though, realities of consequence of international trade have been indicated that argumentations of the theory are very realistic.

In the working paper, the author tried to revise New Trade Theory by emphasizing on its ontology aspect. In order to make the foundation of revision result is applicable, the author tried to develop its methodology (epistemology level).

The author recognizes that to revise a theory is not enough in one working paper (one semester). But, the author hopes that this article become starting point of bravery and spirit in learning application of philosophy of science for economics, especially on international trade.

In fact, after having pursued the lecture of Philosophy of Science at Matriculation Program, Master Program, Faculty of Post Graduate, Bogor Agriculture University, *KPK* of Sam Ratulangi University, in 1988, the author desires to study economics from ontology aspect. This obsession reached its peak when 15 years later, the author took subject of International Trade in Program S3, viz. last two-semester. This happened since all journals which were discussed in the subject only discussed at axiology and epistemology levels. Therefore, the author tried to write the working paper by emphasizing on ontology. For that, the author hopes to get constructive criticism for improvement of the article quality.

Finally, the author hopes that the working paper does not disappoint for the Team of University Level Instructor in subject of Philosophy of Science.

Bogor, May 31, 2004

The Author,

M.R. Yantu

## **ACKNOWLEDGMENT**

Be grateful for God's (*Allah's*) blessing for the completion of the working paper. In fact only blessing of *Allah's* power, the author could finish the working paper.

The author indebted to Prof. Dr. Ir. Rudy Tarumingkeng, Team Leader of University Level Instructor in subject of Philosophy of Science for counsel, directives, and suggestions in lectures of the subject. Thanks to you Mr. Professor for the early criticism to the working paper.

The author also wishes to express his appreciation to Prof. Dr. Ir. Zahrial Coto, and Dr. Ir. Hardjanto for their comment, directives and explanations after paper seminar. Everything is useful for the author.

Grateful acknowledgement is also extended to Prof. Dr. Ir. Isang Gonarsyah for his counsel when the author took lecture in subject of International Trade economics since Master Program until Doctoral Program. Thanks to Mr. Professor for commitment of scientist integrity, which you have shown in class discussion.

To Prof. Dr. Ir. Affendi Anwar who had teach various subjects, especially Public Choice Economics, the author also wishes to express an appreciation for all detail explanations through the lectures. Everything is useful for the author in uncovering weakness of mainstream economics.

Finally, the working paper is dedicated to the author's wife, Mbuinga Molly Ramlah Yantu-Ahmad, and the daughters, Ayu Veybe and Ayi Juybe for their understanding, encouragement, and patience, which have become an important part of this accomplishment.

Bogor, May 31, 2004

The Author,

M.R. Yantu

## I. INTRODUCTION

### 1.1 Background

Science is one of branch of knowledge quickly developed. Nowadays, from one science branch was predicted to be more than 650 branches of science disciplines (Suriasumantri, 1988). In fact, growth of the science has been caused by human vision. The science of Logic develops because human own vision as *homo sapiens* creature. Economics develops because human own vision as *homo economicus* creatures. Politics develops because human creatures own vision as *homo hominilupus* creatures, social science (management) develops because human own vision as *homo hominisocius* creatures.

Economics is queen of social sciences. This science has been developed very fast. This science owns various systems (school or stream). Economic system (school) has been determined era of economy to attack violently the world. As for the economic era early by economy of Cameralist-mercantilism, then economy of Physiocrat-Feodalism, that was followed by economy of Liberal-Capitalism and Social-Marxism, and the last, economy of Conservative-Keynesianism. The last three become basic for industry economy. Nowadays, world have arrived at era of Information economy. This era forms globalization civilization.

Information economy, indeed, have been spirited by economy of Liberal-Capitalism. This system (school) stands on philosophy of *laissez-faire*, *laissez-passer*. Nevertheless, economy of information argues existence of position of stationer will be reached, that is boundary of growth caused by constraint of resources. Meanwhile, resources of land is un-renewable, except mankind can do trans-planet. Thereby, self-controlling in meaning of human being self-guidelines which can save mankind from ruination, and it is not attitude of pragmatic-materialism orienting on profit-maximization,

because the attitude, in turn, will only accelerate reaching of stationer position.

According to explanation previously, apparently that economy have been started and terminated by international (trade) economics, viz. Cameralist-mercantilism and globalization civilization. Gonarsyah (1987) said that theories of international trade could be considered to be a theory wider than common economic theory for specific problem facing in international trade. Though traditionally, its pressure at international trade, but this theory is also applied at problem of inter-individualistic and inter-region trade. Indeed, some reason which motivated people to give all mind to state as set of the economy elementary under consideration of trade theory are first, mobility of international resources are very differ than domestic. Existence of regulation about licensing, immigration, and citizenship each state for example, movement of labor mobility is limited, also the flow of international capital.

Second, other important resources, like land is very limited by movement of its international mobility. Physic transfer of international land is only enabled, if nations alter its territorial by means of war, buying or gift. In addition, in most of states, ownership of land by foreigner are very limited.

Third, environment of economic, social, and political of inter-state very differ than domestic. The Companies of a state face condition of framework of same law, government and institutional. The condition seldom is met in international trade.

Nowadays, the globalization have been become civilization in the world. Globalization of free trade has been lead by GATT emerging debate of opinion between supporters of mainstream economics (orthodox trade theory) and critics of the theory. The supporters of free trade believe that trade will equalize commodity prices which in turn will equalize factor prices.

Consequently, these will narrow gap income among nations. Conversely, some critics of free trade believe that trade and related spatial interaction may lead to an increase in national or regional income differences.

## **1.2 Formulation of Problem**

Debate of free trade has been continued. The debate results in emerging the new trade theory from some critics of orthodox trade theories. Finally, Dunning (1995) said that the international economic transactions are distinguished by two criteria. The first is the degree of similarity between the goods and services. Second, each transaction is classified by its organizational mode. Thus, any paradigm of trade must embrace both *theory of organizational* and *a theory location of economic activity*.

Supporters of orthodox trade theory rejected the thinking of The New Trade Theory; even Bhagwati (1989) rejected the theory far before Dunning emerged the new trade theory. Bhagwati (1989) said that the question of free trade has now returned to center stage. This is not simply because, since 1970s, protectionist *demands* have increased. The *supply* of protection by executives may have been imperiled by careless and incomplete assessments of recent developments in the theory of commercial policy. These developments, first, addressed to the incorporation of imperfect competition systematically into the theory of international trade by focusing on market imperfection and failure. Second, the more fundamental task of incorporating the theory "political" processes such as rent seeking and other unproductive activities. Thus, former, an old bicycle with new wheels, whereas the other, the old bicycle down a different road.

The difference of the opinion on above invited important issue **how to build the new trade theory which is validly, so the theory can be**

**accepted, like or dislike ?** The question will be invite other ones, as follows:

- (i) What is foundation of ontology of revised version of the new trade theory?
- (ii) What is assumption that will be required to the foundation?
- (iii) What is about its epistemology?

### **1.3 Objectives of The Writing**

The objective of the writing is to revise the new trade theory in order to get all of supporters. The working paper will encompass chronological and development of the international trade theory which is in detail will discuss three objects as follow: (i) foundation of ontology of revised version of the new trade theory; (ii) assumption of the foundation, and (iii) epistemology (methodology) level of revised version of the new trade theory.

## **II. DEBATE OF FREE TRADE**

### **2.1 Intuitive Proof of International Factor-Price Equation**

One of important argument of free trade is international factor-price equation. Under the given condition, real factor prices must be exactly the same in all countries (two countries, for example Indonesian and Japan with clothing and electronic products), and indeed the proportion of inputs used in clothing production in Indonesian must equal to the proportion in Japan, and similarly for electronic production. It means that will be automatic self-stabilization in the social system.

That free trade with orthodox theory assumed to have more benefit compared to its loss. According to Samuelson (1981) that was because of first, Intuition tells us that by following an optimal pattern which recognises the difference in factor intensities of the two goods, we can end up on a production possibility curve that is bloated out beyond a constant-cost straight line: obeying the law of increasing marginal costs. In the language



of the market place: an increase in the ratio of wages to rent must in a competitive market press up the price of the labour-intensive commodity relative to the land-intensive commodity.

Second, This one-directional relationship between relative factor prices and relative commodity prices is an absolute necessity, and it is vital for the recognition of the truth in the main theorem, and third that an increase in restrictions to factor movements stimulates trade. It will also make more specific an old argument for protection.

## **2.2 Criticism to International Trade Theory**

Myrdal finds it unrealistic to assume that there is a tendency towards automatic self-stabilization in the social system. Olsen (1971) explained about Myrdal approach of social systems. The approach was summarized in this sub-session. According to Olsen that the Myrdal vision of the social system is that of a system always on the move. It is moved by outside pushes and pulls and by the momentum of its own internal processes. So, he comes to the conclusion that *a liberalization of commodity and factor movements between nations (or regions) will probably make the rich nations (or regions) richer and the poor nations (or region) poorer.*

The Myrdal theory can be illustrated by an example where the barriers to trade are removed between a rich and a poor country. The comparative advantages (CA) of the rich country are in the capital and research-intensive products of the secondary and tertiary industries. The CA of the poor country are in the labor – and land-intensive products of agriculture and other primary production. When the barriers to trade are removed, the rich country will export advanced industrial products to the poor country and the poor country will export traditional primary product to the rich country. He leads to the conclusion that the liberalization of trade will probably make the rich country richer.

The interaction between the two countries will in the poor country have two groups of effects which Myrdal calls "spread effects" and backwash effects" respectively. The *spread effects* are the effects making the poor country better off. The *backwash effects* are the effects making the poor country worse off. The liberalization of trade makes it difficult for the poor country to develop industries. The net effect of trade liberalization on the poor country's income depends upon the balance between the spread effects and the backwash effects. The liberalization may create new inequalities in the international distribution of income by speeding up economic growth in the rich country and slowing it down in the poor country.

If the liberalization of trade is followed up by a liberalization of capital movements. Myrdal is afraid that capital may move from the poor country to the rich country and thus reinforce the tendencies towards a more unequal international distribution of income. Thus, unlike the neoclassical economists. Myrdal believes that the net return on capital may be higher in the rich than in the poor countries.

Finally, Myrdal emphasizes that political and economic conditions may be more stable in the rich country. This may reduce the risks of investment in the rich country compared to those in the poor country. A liberalization of the international movements of labor may also make the rich countries richer and the poor countries poorer.

### **III. Controversial of New Trade Theory**

#### **3.1 The New Trade Theory**

Dunning (1995) said that economics is, if nothing else, a pragmatic social science. Its primary purpose is, or should be, to explain, in the most rigorous way possible, how scarce resources are allocated between alternative uses, and to suggest ways and means of improving this

allocation. Therefore, the happenings of the last century – or even the last two decades – surely confirm that economists must be prepared to modify their paradigms, theories, or models to meet the needs of the time. Indeed, it was not until the 1950's that trade theorists gave any attention at all to technology, market imperfections, and differential consumer tastes. So, he concentrated his attention in his paper (The New Trade Theory). Namely, the nature and character of international transactions have so much changed in recent years (and, indeed, are continuing or do so in the 1990s) that the traditional intellectual apparatus of the international economist is, by itself, no longer adequate to explain real-world phenomena, and only by drawing upon the tools of other branches of economics, notably industrial, institutional, and techno-growth economics, can contemporary cross-border flows of goods, services, and assets be properly understood.

According to Dunning (1995) that several reason might be adduced for the apparent lack of attention given by orthodox trade theorists to nontraditional cross-border transactions. These include a lack of knowledge or understanding about their importance and the belief that such "connected" transactions can be satisfactorily explained by arm's length trade theory. While, advances in the theory of FDI have primarily stemmed from the work of and made use of the tools of industrial economics and theory of the firm.

It was said previously in chapter one that the international economic transactions are distinguished by two criteria. The first is the degree of similarity between the goods and services. Second, each transaction is classified by its organizational mode. Thus, any paradigm of trade must embrace both a *theory of organization* and a *theory location of economic activity* (Dunning, 1995).

In conclusions of his paper, Dunning questioned that what is wrong with trade theory is its failure to address techno-economic micro-organizational and macro-organizational issues and, particularly, the effect

on trade of coordinating resources and transaction across exchanges by alternative modalities. Furthermore, the globalization of the world economy is affecting the pattern of trade in three main ways. First, the increasing mobility of assets is widening the options of firms. The second is the declining significance of arm's length transactions, relative to those conducted between related parties. The third is the increasing role of national governments and supranational regimes in the management of trade. Therefore, that many of the propositions of received trade theory are being upheld by the very organizational forces that they tend to ignore.

Finally, according to Rodriguez and Williams that the globalization of the world economy has resulted in a dramatic reduction in the economic distance between nations. In fact, coordination of competition policy may actually reduce legitimate antitrust enforcement efforts and thereby reduce consumer welfare.

### **3.2 Refusal to The New Trade Theory**

Reasoning of refusal of the new trade theory by all supporter of orthodox trade theory as said by Bhagwati (1989) are first, that The *supply* of protection by executives may have been imperiled by careless and incomplete assessments of recent developments in the theory of commercial policy. These developments, first, addressed to the incorporation of imperfect competition systematically into the theory of international trade by focusing on market imperfection and failure. Second, the more fundamental task of incorporating the theory "political" processes such as rent seeking and other unproductive activities. Thus, former, an old bicycle with new wheels, whereas the other, the old bicycle down a different road. Second, Early theorists conjectured that, even though a country may reap a short-term advantage by exploiting with a tariff its market power, retaliation would leave all worse off. Thus, domestic market failure were best dealt with, not by trade policy interventions, but by choosing domestic policies tailor-made

to assist and countervail the market failure at its source. Third, Therefore, the case for free trade could be strengthened yet further if we could argue that : (1) market failures were unimportant and/or self-correcting, hence needing no intervention at all; (ii) the puppet government view was an irrelevance, but reverse instead; (iii) the cost of such perverse interventions was greater than conventional analysis suggested.

## **IV. PHILOSOPHY ORIENTATION OF INTERNATIONAL TRADE THEORY**

### **4.1 Supra-naturalism vs. Naturalism**

Since long time up to now, and it is probable in future time, there are two big concepts (understands) which have been influenced thinking of human being. Though, in fact the both are in contradiction mutually. The concepts (understand) are Supra-naturalism and Naturalism. The both emerged because of human's interpretation about realities of universe.

Suriasumantri (1988) said that early interpretation given by human being to this nature is that there is something having the character of occult (supernatural). The existence has higher and more powerful characters compared to a real nature. Animism is form of primordial from supernaturalism. On the contrary, there is concept of naturalism, which refused opinion of the supernaturalism concept. Concept of materialism is based on the naturalism has opinion that natural phenomenon are not caused by the supernaturalism but by power of natural. This can be learned, so it can be know.

In this article, supernaturalism and supra-naturalism are terms, which have same meaning. But the author prefers to use supra-naturalism since the term more represents real meaning.

Concept of supra-naturalism assumes that in fact there is invisible something that creates, dominates, even arranges this universe. In Islam, it

was mentioned explicitly in *Al Qur'an*, viz. *Al Fatihah* and *Al Ikhlas* Letters. In fact, animism is form of primordial from concept supra-naturalism. On the contrary, concept of naturalism assumes that in fact nothing that creates, dominates, even less arranges this universe. That occurrence which goes in this universe in fact represent an regularity generated by natural law. Thus, there is a kind of automatic mechanism, and this can be learned and can be dominated, so that is clear, it is not invisible.

With appearance of globalization civilization, naturalism, seems will be more dominant. How do not, in echo of globalization which have been based on technology of sophisticated information, mankind with their vision as *homo economicus* creature will be orient clearly to profit maximization. Thus, pragmatic-materialistic predominate thinking pattern of human being (mankind), and in turn to derive action of human being. Logical consequently, mankind will go away thinking which have the characteristic of normative-prescriptive. When this matter is happened, at condition extremely, this will conducive to act of despising to concept of supra-naturalism. In turn, this will make mankind fall down to what is referred as atheism.

Nowadays, globalization with its pro and con's offer gold opportunity in life of mankind. But, indeed, from religious-spiritual aspect, the groups of developing countries keep on guard against properly the era. Because, with condition of level of income is lower, and certainly information are really combination pushing human being (mankind) act as *homo economicus* creature, who is allowing all way of, walking over others human being corpse (carcass). They do not care of friends or rivals, since which is important for him that target can be reached. Such as condition, in return, will keep away thinking of human being (mankind) from understanding of supra-naturalism, and more and more to draw their closing on understanding of naturalism.

In globalization civilization, understanding of naturalism seems will be glorious, because this civilization has been predominated and colored by philosophy of liberal-capitalism. Liberal-capitalism have succeeded totally ruined socialism. History indicated that liberal-capitalism, in the form of neo-liberalism started to creep in East Block, socialism citadel, when in the block emerged *perestroika* and *glasnot* launched by figure of reformist, Michael Gorbacheb in 1980s. Over there emerging what is referred as a market socialism. Gorbacheb become one of receivers of Nobel Prize of peace. Yeltsin changed Gorbacheb in leading soviet, launched what is referred as a market integration. Furthermore, economics of conservative-Keynesianism had glorious for almost two-third century in English perforce to confess excellence neo-liberalism. In a period of Margaret Thatcher's governance, English launched what is referred as capitalism popularly.

In Indonesia most of experts calling upon market liberation as against to market domination by government. Even amendment of UUD 1945 implies big liberalism to predominate life of social, economy and politic in Indonesia. This means that concept of naturalism really will be glorious in Indonesia.

Intrinsically, there is a red yarn, which is connecting supra-naturalism and naturalism. **First, science** have to be exploited. Indeed, study of ontology of science is realities object, which can be achieved by human experience. This becomes important attention for concept of **naturalism**. **Second**, value of **religion** has to be implemented in everyday life. But, what is study about religion ontology? Its answer is period of death and judgment, eternity, heaven and hell, and the miscellaneous, altogether extraordinary range of experience of human being. Thus, this represents important attention from concept of **supra-naturalism**. **Third**, science and religion have to be connected. This means **philosophy** become important, because indeed the philosophy represent bridge of linkage **between**

**science and religion**, so it represent bridge of linkage **between naturalism and supra-naturalism**.

With understanding science, philosophy and religion is integrally and intact (comprehensive), human being can draw red yarn, which is connecting supra-naturalism and naturalism. For example, in study of ontology of science from a reality object, each person can include supra-naturalism values. This is logic and fair, because study of ontology of science from a reality object is intrinsically full values. Thereby, naturalism as top gun of world organizer will be spirited by its rival, supra-naturalism.

## **4.2 Foundation for Economics' Ontology**

Tarumingkeng (2002) explained about ontology as follows:

- (i) The word "ontology" seems to generate a lot of controversy in discussions about AI. It has a long history in philosophy, in which it refers to the subject of existence. It is also often confused with epistemology, which is about knowledge and knowing.
- (ii) In the context of knowledge sharing, I use the term **ontology to mean a specification of a conceptualization**. That is, an ontology is a description (like a formal specification of a program) of the concepts and relationships that can exist for an agent or a community of agents. This definition is consistent with the usage of ontology as set-of-concept-definitions, but more general. And it is certainly a different sense of the word than its use in philosophy.
- (iii) What is important is what an ontology is *for*. My colleagues and I have been designing ontologies for the purpose of enabling knowledge sharing and reuse. In that context, an ontology is a specification used for making ontological commitments. For pragmatic reasons, we choose to write an ontology as a set of definitions of formal vocabulary. Although this isn't the only way to



specify a conceptualization, it has some nice properties for knowledge sharing among AI software (e.g., semantics independent of reader and context). Practically, an ontological commitment is an agreement to use a vocabulary (i.e., ask queries and make assertions) in a way that is consistent (but not complete) with respect to the theory specified by an ontology. We build agents that commit to ontologies. We design ontologies so we can share knowledge with and among these agents.

- (iv) Definition according to Webster's Dictionary: **a branch of metaphysics relating to the nature and relations of being a particular theory about the nature of being or the kinds of existence.**
- (v) Ontology (the "science of being") is a word, like metaphysics, that is used in many different senses. It is sometimes considered to be identical to metaphysics, but we prefer to use it in a more specific sense, as that part of metaphysics that specifies the most fundamental categories of existence, the elementary substances or structures out of which the world is made. Ontology will thus analyze the most general and abstract concepts or distinctions that underlie every more specific description of any phenomenon in the world, e.g. time, space, matter, process, cause and effect, system.
- (vi) Recently, the term of "(formal) ontology" has been up taken by researchers in Artificial Intelligence, who use it to designate the building blocks out of which models of the world are made. An agent (e.g. an autonomous robot) using a particular model will only be able to perceive that part of the world that his ontology is able to represent. In a sense, only the things in his ontology can exist for that agent. In that way, an ontology becomes the basic level of a knowledge representation scheme.

- (vii) **The subject of *ontology* is the study of the *categories of things that exist or may exist in some domain*.** The product of such a study, called *an ontology*, is a catalog of the types of things that are assumed to exist in a domain of interest ***D*** from the perspective of a person who uses a language ***L*** for the purpose of talking about ***D***. The types in the ontology represent the *predicates, word senses, or concept and relation types* of the language ***L*** when used to discuss topics in the domain ***D***. An uninterpreted logic, such as predicate calculus, conceptual graphs, or KIF, is *ontologically neutral*. It imposes no constraints on the subject matter or the way the subject may be characterized. By itself, logic says nothing about anything, but the combination of logic with ontology provides a language that can express relationships about the entities in the domain of interest.
- (viii) An informal ontology may be specified by a catalog of types that are either undefined or defined only by statements in a natural language. A formal ontology is specified by a collection of names for concept and relation types organized in a partial ordering by the type-subtype relation. Formal ontologies are further distinguished by the way the subtypes are distinguished from their supertypes: an *axiomatized ontology* distinguishes subtypes by axioms and definitions stated in a formal language, such as logic or some computer-oriented notation that can be translated to logic; a *prototype-based ontology* distinguishes subtypes by a comparison with a typical member or *prototype* for each subtype. Large ontologies often use a mixture of definitional methods: formal axioms and definitions are used for the terms in mathematics, physics, and engineering; and prototypes are used for plants, animals, and common household items.

Foundation of economics' ontology is consumptive satisfaction; with basic assumption that human is *homo economicus* creature. In fact, Adam Smith (1723 - 1790) extracted the foundation from values going into effect in West, viz. individualistic values (selfish or self-centered). Therefore, Adam Smith represents supporter and adviser philosophy of *laissez faire*, "just let happened", and of *Laissez passer*, "just let take place".

Since human own element of natural appetite, then the model builded on the foundation of ontology, viz. consumptive satisfaction, and especially with basic assumption of *homo economicus*, really making human have to the character of and act liberally, if it is not wild, and added with philosophy of *laissez faire*, *laissez passer*, then it become really horrible, over there nothing at all word "love" and "affection". **The strongest is the king.**

In Indonesia, since long time, objective of national development have been very ideal and normative, viz. even distribution of material and spiritual. The objective is impossibility to achieve. Because, system of Indonesia economics, since long time has been predominated by system of liberalism-capitalism, with paradigm of economic growth, relying on capital. Though the capital has been only borrowed from foreign state. Nowadays by amendment of UUD 45, without GBHN (guidance of development), the chosen president has not guidance in compiling plan and development programs. Thus, programs of development will very colored by vision of chosen president and the party obtained a lot of voices in election of member of *Dewan Perwakilan Rakyat* and too of *Dewan Perwakilan Daerah*. This means **Indonesia** will go to **big liberalism**.

Logical consequences of big liberalism are pursuing of materialistic growth, and this in line with consumptive satisfaction, viz. materialism philosophy as foundation of economics' ontology. This condition, although hesitates, but it will make reaching of some objective of national development, viz. aspect of its material. But, this condition are very trusted

will not make reaching of the objective in aspect of spiritual, because anything which is immaterial can not be reached by material. These are very simple but too logical.

The explanation previously emerges the important conclusion. In future time, Indonesia shall pay attention for all aspects of science, viz. axiology, epistemology, and ontology. Because, if aspect of ontology does not get attention which strong enough, debate of incompetent of application of mainstream theory from international economics will never finish.

### **4.3 Vision of Human Being**

Science is one of branch of knowledge expand quickly. From one branch of science is predicted, nowadays have been expanded more than 650 branches of sciences discipline (Suriasumantri, 1988). It was said previously that in fact, development of the science has been caused by vision of human. For example, the science of Logic develops, because human own vision as *homo sapiens* creature. Economics develops because human own vision as *homo economicus* creature. Politics develops because human own vision as *homo hominilupus* creature. Social science (management) develops because human own vision as *homo hominisocius* creature.

Suwarno (1985) said that view on human related to the nature of real exist in human being. The nature as follows:

- (i) *Homo religious*. It means that human being intrinsically is the creature who has a religion. Therefore, awareness of religious has to be developed through religion education.
- (ii) *Homo sapiens*. It means that human being intrinsically is wise creature or the creature that can think. Because of the essence, mind of human being has to be developed through intellectual education.

- (iii) *Homo economicus*. It means that human being intrinsically is the creature having awareness of economic. Therefore, economic principles have to be developed through economics education.
- (iv) *Homo faber*. It means that human being is creature who having the apparatus to create something. Therefore, skill education has to be developed.
- (v) *Zon politicon*. It means that human being is creature who having awareness of political. This essence can be developed through education of civics and citizen.
- (vi) *Homo homini socius*. It means that human being is close alley for others.
- (vii) *Homo sacre res homini*. It means that human being is holy creature for others. Because of the two last essence, social education have to developed.

There are many branches of science now became real evidence of various human vision. Thus, when a study of problem will involve several of branches of science disciplines, like international trade (economics), it is very irrational if assuming that each person who involved is *homo economicus*. This in fact is really problem and very important. Because up till now, there have not been article yet which study about foundation of ontology for multi-discipline, especially highlighting international trade (economics). The subject is very complex and complicated.

That human being pursues consumptive satisfaction in fact was only based on vision of *homo-economicus*. Meanwhile, human being involves in globalization of free trade are human being own various of vision. Thus, development of human being vision will be needed in across-discipline. This in fact become the part of ontology. All this time, it has been not considered in building new trade theory, so the theory is un-robust.

Implications of *homo economicus* and *homo hominilupus* visions are that human being basically have the character of selfish (self-centered), human being are egoist creature. In fact these are fair, but factious matter is individualistic egoism. This is bad character potentially of human being. Individualistic egoism will very develop and expand at media *laissez faire* and *laissez passer*. This means that potency of nature of human goodness will not expand at the condition. Consequently, individual are well behaved, caused by importance, which he/she pursues, and this represent the nature of hypocrite. Though, Al Qur'an, viz. QS 7: 172; QS 89: 27 - 28; QS 2: 30, and QS 23: 71, expressed that in fact all human being since borne to bring potency of ugly and good characters.

#### **4.4 Positivism vs. Post-positivism**

The concept of positivism philosophy was lead by Auguste Comte (1798 - 1850). Lubis (2003) said that Comte equalize which are positive with reality, real, actual, and existing. Positive term is related at real objects and occurrences. It means that its existence is not as illusion or there's only in mind. Thus, the existing is compliance to fact; at what is going on, and it is not at what wanted or expected. As Thomas Hobbes, Comte believed that society is the part of natural, therefore, method of research of natural sciences can be used and have to be applied to find law and theory of social sciences.

Good intention of Comte was misinterpreted deliberately by devotee of mechanistic-materialism whose orientation of naturalism. This resulted wave of positivism which increasing growth of free-values sciences. These, in turn, more tighten position of all supporter of naturalism concept.

According to Lubis (2003) attitude and reaction of refusal to view of positivism emerged at the 19<sup>th</sup> century. It was caused by unsatisfying to domination of positivism which naturalistic and deterministic. Husserl (1856 -

1938) refused scientific naturalism, which use method of mathematics to abstract natural, and furthermore, using the result of abstraction as realities. Naturalism makes absolutism of method of experimental, to see awareness of human being as fact of natural with regardless of its function as interpreter of facts.

Keen criticisms of Feyerabend was enough effectively to force open view of scientism (positivism). He presented evidence to be based on analysis of history that science expand because of its freedom. It is not fence in single regulation or only applying one rigorous method (Lubis, 2003).

When young scientist of Fisics, Huisenberg (1924) found to dissociate object and subject in disintegration of electron, emerging new era in science recognized by the name of post-positivism era. World even as if was inversed, and all thinker even also became to confuse, inclusive of Einstein who said I unconvinced that the God (*Allah*) plays at dice.

In positivism era, truth is single. But in era of post-positivism, truth is not single, and way of reaching them even also is not just one. Reality is only result of construction of human thinking. Consequently, that human will not reach really truth.

Post-positivism era, indeed, are era of supporters' concept of supra-naturalism. But, unfortunately, the supporters who understood economics are just few.

#### **4.5 The Behavioral Assumptions in a Theory of Institutions**

Theory of organization is branch of management. While, basic assumption of development of management was that human have been vision of *homo hominisocius*. Furthermore, Gibson, Ivancevich and Donnely (1994) said that organizations were differed from other form of people groups. Based on behavior aspect, the organizations orients to objective.

They pursue some objectives and targets that can be reached effectively, and to act based on agreement. The organizations have three of important characteristics, i.e. behavior, structure, and progress.

Institutions are the organizing principles of interaction (Lin, 2001). They are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction. In consequence they structure incentives in human exchange, whether political, social, or economic (North, 1999). These rules serve as the traffic guides in the flow and transactions of goods (both material and symbolic) among actors, including both individuals and organizations. When organizations and individuals subject themselves to a similar set of institutions, they are said to be in an *institutional field* (Lin, 2001). Institutional change shapes the way societies evolve through time and hence is the key to understanding historical change (North, 1999).

Institutions affect the performance of economies is hardly controversial. That the differential performance of economies over time is fundamentally influenced by the way institutions evolve is also not controversial. Yet neither current economic theory nor cliometric history shows many signs of appreciating the role of institutions in economic performance because there as yet has been no analytical framework to integrate institutional analysis into economics and economic history (North, 1999).

Institutional analysis proposes yet another meaningful tool to understand how organizations should be seen as tied to the larger environment. The survival and persistence of an organization are seen as dependent not only on its efficiency or competitiveness in the marketplace, but also in its ability to adjust to and to comply, with expected behaviors as dictated by larger social institutions in society. Subscribing to such social rules leads to isomorphic structuring and behaviors of multiple organizations,



or institutional isomorphism, which cannot be explained by competitiveness or performance criteria alone (Lin, 2001).

The explanations previously showed that the behavioral assumptions in a theory of institutions are important. According to North (1999) that all theorizing in the social sciences builds, implicitly or explicitly, upon conception of human behavior. These traditional assumptions have prevented economists from coming to grips with some very fundamental issues and the social sciences. What behavior then is consistent with an institution-free world (or at least one where the institutions function costless). North begins by what is meant by expected utility theory, which is the underlying behavioral assumption of neoclassical economics. In the past twenty years, this approach has come under severe attack and also has found strong defenders. Most of the anomalies have emerged in the context of carefully designed experiments, which deal with rather limited sets of issues.

According to North (1999) that perhaps the best summary of the neoclassical behavioral assumptions was made by Sidney Winter. He argues that there are seven steps to what he calls the classic defense of neoclassical behavioral assumptions. They are:

- (i) The economic world is reasonably viewed as being in equilibrium.
- (ii) Individual economic actors repeatedly face the same choice situations or a sequence of very similar choices.
- (iii) The actors have stable preferences and thus evaluate the outcomes of individual choices according to stable criteria.
- (iv) Given repeated Exposure, any individual actor could identify and would seize any available opportunity for improving outcomes and, in the case of business firms, would do so on the pain of being eliminated by competition.

- (v) Hence no equilibrium can arise in which individual actors fail to maximize their preferences.
- (vi) Because the world is in approximate equilibrium, it exhibits at least approximately the patterns employed by the assumptions that the actors are maximizing.
- (vii) The details of the adaptive process are complex and probably actor and situation specific. By contrast, the regularities associated with optimization equilibrium are comparatively simple; considerations of parsimony, therefore, dictate that the way to progress in economic understanding is to explore these regularities theoretically and to compare the results with other observations.

By returning to the classic defense and reacting to the seven points Winter previously sets forth as follows:

- (i) For some purposes the concept of equilibrium is a valuable tool of analysis, but for most of the issues that we are concerned with there is not one equilibrium, but multiple equilibria that arise because “there is a continuum of theories that agents can hold and act on without ever encountering events which lead them to change their theories” (Hahn, 1987).
- (ii) Although individual actors face many repetitious situations and, as noted above, can act rationally in such situations, they also are confronted with many unique and non-repetitive choices where the information is incomplete and where outcomes are uncertain.
- (iii) Although Becker and Stigler have made an impressive case (1977) for relative price changes accounting for many apparent changes in preferences, the stability issue is not so easily dismissed. Not only do anomalies show up at the disaggregated level at which psychological research has been conducted, but certainly historical evidence suggests that preferences over time change. I know of

no way to explain the demise of slavery in the nineteenth century that does not take into account the changing perception of the legitimacy of one person owning another.

- (iv) Actors would certainly like to improve outcomes, but the information feedback may be so poor that the actor cannot identify better alternatives.
- (v) Competition may be so muted and the signals so confused that adjustment may be slow or misguided and the classic evolutionary consequences may not obtain for very long periods of time.
- (vi) The condition of the world throughout history provides overwhelming evidence of much more than simple rational non-cooperative behavior.
- (vii) The behavioral assumption of economists is useful for solving certain problems. They are inadequate to deal with many issues confronting social scientists and are the fundamental stumbling block preventing an understanding of the existence, formation, and evolution of institutions.

## **4.6 Framework of Proposed New Trade Theory**

### **4.6.1. Foundation of Ontology for New Trade Theory**

In order to new trade theory is un-robust, and because of free trade entangle a lot of the interested parties, so it became very complex, covering various actor with various vision, framework of proposed new trade theory must accommodate well various vision of actors who concerned.

The Opinion of Dunning, which have been proposed above very logical and realistic. According to Stiglitz that decisions were often made because of ideology and politics (Stiglitz, 2002). Therefore, the new trade theory have to be develop on base of across-science, that is economics,

politics, and social. This means at least there are three vision of human which can be elaborated to become elementary assumption as foundation for philosophy of the new trade theory, viz. human as *homo economicus*, *homo hominilupus*, and *homo hominisocius* creatures.

Naturally as proposed previously that each person borne with ugly and good potency, therefore the idea which integrating various vision of human in one individual is not irrational. Therefore, the idea required one elementary assumption of view about human whose own various these vision. If human with vision as *homo-economicus* creature can be assumed as human who pursuing consumptive satisfaction, the human with three vision have been proposed above can be assumed as human who pursuing **creative satisfaction**. This assumption is very precise, since human have been delegated by Allah SWT, to world to become leader in the earth (*khalifahtullah fiel ardh*) (QS 2).

Assumption previously also was proposed by Prof. Hidajat Nataatmadja for foundation of ontology of national economy. But, it did not get greeting, because, it is impossible. Economics have been developed since there are human who own *homo economicus* vision. Thus, it is impossible to elaborate economics by assumption that human will pursue creative satisfaction. Thus, the assumption is only precisely to develop foundation for ontology of across-science branches, like free trade theory.

The assumption that human have vision of creative satisfaction to be realistic if seven points of assumptions that proposed by North (1999) in sub-session previously are realistic. According to North (1999) that a precise and tidy behavioral model that not only explained why institutions are a necessary extension of the way human beings process information, but also predicted the complex mix of motivations that shape choices. Indeed, it was enough to explain the existence of institutions and (less precisely) the motivation of the actors that helps to shape institutions and provides the

means by which altruism and other non-wealth-maximizing values enter the choice set. Thus, institutions exist to reduce the uncertainties involved in human interaction. These uncertainties arise as a consequence of both the complexity of the problems to be solved and the problem-solving software possessed by the individual.

#### **4.6.2. Epistemology Level**

Tarumingkeng (2002) explained about epistemology as follows:

- (i) Epistemology, the study of the nature, origin, and limits of human knowledge. The name is derived from the Greek *epistēmē* ("knowledge") and *logos* ("reason"), and accordingly the field is sometimes referred to as the theory of knowledge. Epistemology has had a long history, spanning the time from the pre-Socratic Greeks to the present. Along with metaphysics, logic, and ethics, it is one of the four main fields of philosophy, and nearly every great philosopher has contributed to the literature on the topic.
- (ii) Science educators have spent a great deal of time debating the relative importance of content and process, of learning important concepts as well as the investigative methods we use to form those concepts. The "epistemology" portion of our model, however, encompasses both, acknowledging that little conceptual or procedural learning can take place in isolation from the other. It also includes the strict definition of epistemology as a view of knowledge. Students' views of scientific knowledge range from absolute to tentative, from fractured to integrated, from fact-based to theory-based (Rubba & Anderson, 1978; Lederman & O'Malley, 1992). In many ways, the development of students' views of a discipline may mirror the discipline's own development; in the case of science, the historical progression from a logical-positivist

orientation to a more personally- and culturally-constructed view of inquiry must be made individually by many students.

- (iii) Constructivism is a philosophy of teaching that successfully integrates content and process, resolving this traditional dichotomy. Constructivism draws on such models as Kolb's Experiential Learning Cycle (1984), which has long been a useful conceptualization of inductive learning processes. Rather than having knowledge "deposited" into their empty minds, students must construct meaning from learning experiences, a process that is complicated by the knowledge students bring with them. Often students have naive or misconceived notions that are not uncovered or addressed by traditional pedagogy (Gardner, 1991). Methods which directly confront students' misconceptions, often by setting up conflicts between their predictions and actual observations, help students construct new conceptual frameworks that accurately incorporate new information rather than allowing them to distort or oversimplify new information to fit their existing frameworks.

For epistemology level, methodology is very important. What is methodology, which can sustain theory of revised new trade? Indeed, there are various concept of methodologies have been influenced by various concept of philosophy.

There are three methodologies type, viz. methodology of positivism, normativism, and pragmatism (Johnson, 1986). Methodology of Positivism tests knowledge of pursuant to criteria of correspondence truth. Methodology of Normativism tests knowledge with reference of criteria of coherence truth. Methodology of Pragmatism tests knowledge of pursuant to criteria of "pragmatic" truth. But, "pragmatic" is intended here not pragmatic in common meaning, but synthesis of correspondence and coherence.

Along of theory of the revised new trade is considering things which positive and normative, most appropriate methodology is methodology of pragmatism. But to run the methodology will be need understanding of analysis of system. Therefore, method of *tetrahedron* analysis and game theory are very required in application of the revised new trade theory.

## V. CONCLUSION

According to explanations previously, it can be concluded that the revision of the new trade theory have to be developed on foundation of across-science ontology, viz. economics, politics, and sociology. This means at least there are three vision of human being which can elaborated to become elementary assumption as foundation for philosophy (ontology) of the new trade theory, that is human as *homo economicus*, *homo hominilupus*, and *homo hominisocius* creatures.

The human being having three vision proposed above can be assumed as creature is pursuing **creative satisfaction**. This assumption is very appropriate, since human being have been delegated by Allah SWT, to world to become leader in the earth.

The assumption that human have vision of creative satisfaction to be realistic if seven points of assumptions that proposed by North (1999), i.e. that a precise and tidy behavioral model that not only explained why institutions are a necessary extension of the way human beings process information, but also predicted the complex mix of motivations that shape choices. Thus, institutions exist to reduce the uncertainties involved in human interaction. These uncertainties arise as a consequence of both the complexity of the problems to solved and the problem-solving software possessed by the individual.

Along of new trade theory of revised version is considering all positive and normative things, at epistemology level, the most appropriate

methodology is methodology of pragmatism. But to run this methodology need the understanding of analysis of system. Therefore, method of tetrahedron analysis and game theory are very required in application of revised version of the new trade theory.

To make the powerful assumption (human being is creative satisfaction), it is necessary to pursue a deep study about human being from religion philosophy, human being philosophy, social philosophy, sociology, and psychology aspects.

## REFERENCES

- Al Qur'an, 1980, **Terjemahan**, Departemen Agama Republik Indonesia, Jakarta.
- Bell, Daniel dan Irving Kristol, 1988, **Krisis Teori Ekonomi**, LP3ES.
- Bhagwati, Jagdish N (Ed), 1989, **Is Free Trade Passe After All ?** Selected Readings, The Massachusetts Institute of Technology.
- Chacholiades, Miltiades, 1978, **Intenational Trade Theory and Policy**, Inteenational Student Edition, McGraw-Hill Kogakusha, LTD, Tokyo.
- Dirdjosisworo, Soedjono, 1985, **Pengantar Epistemologi dan logika**, Cetakan Pertama, Remaja Karya CV, Bandung.
- Dunning, John, H., 1995, **What's Wrong – and Right – with Trade Theory ?**, The International Trade Journal, Volume IX, No. 2, Summer 1995.
- Gibson, James L, John M. Ivancevich, and James H. Donnelly, Jr, 1994, **Organizations**, 4<sup>th</sup> Edition, Terjemahan Djoerban Wahid, Penerbit Erlangga, Jakarta.
- Gonarsyah Isang, 1987, **Landasan Perdagangan Internasional**, Bahan Kuliah, Departemen Ilmu-ilmu Sosial Ekonomi Pertanian, Institut Pertanian Bogor, Bogor.
- Johnsons, Glenn, L., 1986, **Research Metodology fo Economists Philosophy and Practice**, Macmillan Publishing Company, New York, Collier, Macmillan Publishers, London.



- Koesters, Paul-Heinz, 1988, **Tokoh-Tokoh Ekonomi Mengubah Dunia**, Pemikiran-pemikiran yang Mempengaruhi Hidup Kita, Penerbit PT Gramedia, Jakarta.
- Krugman, Paul R. dan Maurice Obstfeld, 2000, **International Economics, Theory and Policy**, Fifth Edition, Addison-Wesley Publishing Company, Reading, Massachusetts, Menlo Park, California, New York, Harlow, England, Don Mills, Ontario, Sydney, Mexico City, Madrid, Amsterdam.
- Lin, Nan, 2001, **Social Capital, A Theory of Social Structure and Action**, Cambridge University Press.
- Lubis, Akhyar Yusuf, 2003, **Paul Feyerabend, Penggagas Antimetode**, Seri Tokoh Filsafat, Penerbit Teraju.
- Markusen, James R., James R. Melvin, William H. Kaempfer dan Keith E. Maskus, 1995, **International Trade, Theory and Evidence**, International Edition, McGraw-Hill, Inc., New York, St. Louis, San Fransisco, Auckland, Bogota, Caracas, Lisbon, London, Madrid, Mexico City, Milan, Montreal, New Delhi, San Yuan, Singapore, Sydney, Tokyo, Toronto.
- North, Douglass C., 1999, **Institutions, Institutional Change and Economic Performance**, Political Economy of Institutions and Decisions.
- Rodriguez, A.E. and Mark D. Williams, **Do We Need Harmonized Competition Policy in An Integrated World Economy ?**
- Samuelson, Paul, A, 1981, **International Factor Prices Equalisation Once Again**, dalam Bhagwati, Jagdish N (Ed), 1981, **International Trade** : Selected Readings, The Massachusetts Institute of Technology.
- Suwarno, 1985, **Pengantar Umum Pendidikan**, Cetakan Kedua, Aksara Baru, Jakarta.
- Stiglitz, Joseph E., 2002, **Globalization and Its Discontents**, Allen Lane, Penguin Press.
- Suriasumantri, jujun S., 1985, **Ilmu dalam Perspektif, Sebuah Kumpulan Karangan tentang Hakekat Ilmu**, Diterbitkan untuk Yayasan Obor Indonesia dan LEKNAS – LIPI, PT. Gramedia Jakarta.

- , 1998, **Filsafat Ilmu, Sebuah Pengantar Populer**, Cetakan Kesebelas, Pustaka Sinar Harapan, Jakarta.
- Tafsir, Ahmad, 1992, **Filsafat Umum, Akal dan Hati Sejak Thales sampai James, Pengantar kepada Filsafat untuk Mahasiswa IAIN dan Perguruan Tinggi Lainnya**, PT. Remaja Rosdakarya, Bandung.
- Tarumingkeng, R.C., 2002, **CD Materi Kuliah Filsafat Ilmu**, Sekolah Pascasarjana, Institut Pertanian Bogor, Bogor.
- Tim Redaksi Driyarkara (Penyunting) 1993, **Hakekat Pengetahuan dan Cara Kerja Ilmu-Ilmu**, Seri Filsafat Driyarkara : 5 Capita Selecta, PT. Gramedia Pustaka Utama, Jakarta.
- Yantu, M.R., 1996a, **Supranaturalisme vs Naturalisme**, Kolom Opini, Mercusuar, Harian Pagi Nasional Pertama Di Sulawesi Tengah, Terbitan Jumat, 5 Juli 1996 – 18 Shafar 1417 H.
- , 1996b, **Ekonomi Informasi dan Liberalisme Kapitalisme**, Kolom Opini, Mercusuar, Harian Pagi Nasional Pertama Di Sulawesi Tengah, Terbitan Jumat, 19 Juli 1996 – 03 Rabiul Awal 1417 H.